DOCUMENT RESUME

ED 122 486 EC 082 864

AUTHOR Brandell, Mary Ellen
TITLE The Role of the Speech Pathologist in Pre-School Screening.
PUB DATE Apr 76
NOTE 9p.; Paper presented at the Annual International Convention, The Council for Exceptional Children (54th, Chicago, Illinois, April 4-9, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage
DESCRIPTORS Exceptional Child Education; Identification; *Language Development; *Language Handicapped; Language Tests; Maturation; Morphology (Languages); Phonemes; Preschool Education; Preschool Evaluation; Role Perception; *Screening Tests; Semantics; Speech Evaluation; *Speech Handicapped; *Speech Therapists; Syntax

ABSTRACT

Described are areas of speech and language which the speech pathologist must evaluate in the preschool screening process. Phonemic development, morphological development, syntax, and semantic development are discussed in terms of normal developmental stages and methods of evaluation. (LS)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED122486

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE ROLE OF THE SPEECH PATHOLOGIST IN PRE-SCHOOL SCREENING

Mary Ellen Brandell, Coordinator
Speech and Language Clinic
Central Michigan University
Mount Pleasant, Michigan 48859

The role of the speech pathologist in the pre-school screening process has drastically changed during the past 10 years. Our methods of evaluation are continually changing and adapting to the new insights that researchers in children's language development are giving us.

The speech pathologist took a set of articulation picture cards and a portable audiometer and felt he was able to adequately serve the needs of the pre-school population.

No longer do we evaluate the child's speech only in terms of his articulation skills with this type of screening procedure. Nor do we consider our older methods for hearing screening adequate. The speech pathologist has turned the audiometer over to the audiologist who has also added new dimensions to the screening process.

We used to view the child's speech in terms of "how he sounded". Were we able to understand what he said? Was his speech intelligible or unintelligible? What sounds were missing from the child's speech? What sounds was he substituting for other sounds? This area of speech and language, the articulation skills of the child, was the one which received the most attention- probably because it was the most obvious one and the easiest to evaluate and sometimes the easiest to remediate.

The contributions of individuals such as Slobin, Chomsky, Lee, Menyuk, and Brown and others to the subject of children's language have given the speech pathologist new insights into an exciting and fascinating area.

Let me briefly describe the areas of speech and language which the speech pathologist must evaluate in the screening process.

1. Phonemic Development - (Sound System)
2. Morphological Development - (Words in children's communication system)
3. Syntax - (Rules of word order and arrangement)
4. Semantic Development - (Meaning of words)

PHONEMIC DEVELOPMENT

The sounds of speech are called phonemes. They are essentially the basic building blocks of a language. Children's sound systems are usually complete by the time they begin first grade. Before this, children approximate the sounds of the adults in their world. Children communicate effectively with their incomplete set of sounds. All children learn their phonemic system in an orderly fashion.

EC082964

Table (1) illustrates the general trend in children's production mastery of phonemes in all word positions (initial, middle and final). This chart shows that some sounds are acquired earlier than others.

TABLE (1) Children's Mastery of Phonemes, According to Age

Age of Mastery	Phonemes
3 years	/b/, /m/, /n/, /f/, /w/, /h/
4 years	/p/, /d/, /g/, /k/, /y/, /l/, /t/
5 years	/v/, /s/, /z/
5 1/2 years	/r/
6 years	/j/*
6+ years	/θ/, /ð/, /ŋ/**

Adapted from Paula Menyuk, The Acquisition and Development of Language (Englewood Cliffe, N.J.: Prentice-Hall, Inc. @ 1971), pp. 78-79.

*/j/ yellow

**/θ/ thumb, that /ð/, thing /ŋ/

Children with articulation (phonological) problems sometimes, 1) substitute one phoneme for another, 2) omit a phoneme in a word, or 3) distort a phoneme in some way.

Many sound substitutions are normal for pre-school and early elementary children such as /w/ for /r/. Sound substitutions are not normal for older children and adults.

The speech pathologist analyzes the child's speech by:

1. Recording the incorrect sounds that are misarticulated.
2. Recording the sounds that are omitted from the child's speech.
3. Recording the sounds that are distorted in the child's speech.
4. Compares the child's performance with norms which are established for his age level.

The speech pathologist examines the sound system as he has done in previous years. Picture cards, objects or standardized tests can be utilized. The speech pathologist decides on the basis of the child's responses whether or not the child's error sounds, if any, are normal for his age level. It is generally felt that the 4 year old's speech should be 80% intelligible to those outside his immediate family. In other words, most of what the four year old child says should be "understandable". The area of articulation as I previously stated, is usually the easiest to evaluate.

The following standardized tests are used to evaluate the phonological development of the pre-school child: Templin-Darley Test of Articulation, Goldman-Fristoe Woodcock Test of Articulation, VanRiper Ericson Predictive Screening Test, and Photo-Articulation Test.

MORPHOLOGICAL DEVELOPMENT

Another area of language is that of Morphology which refers to words or morphemes, the smallest meaningful units of language. Dog is a morpheme, cat is a morpheme, jump is a morpheme.

The child's acquisition of words or morphemes is actually the acquisition of meaning. Children learn the meanings of free morphemes like dog, cat and jump which are commonly understood as vocabulary items and they learn bound morphemes which consists of inflectional endings such as /s/ meaning plural and ing.

Bound morphemes begin to emerge in pre-school years. The plurals, possessives, and the present progressive verb endings are learned first. The more difficult tense endings, such as the irregular post and the future take more time to develop.

Roger Brown has offered us a valuable tool for evaluating pre-schoolers. His research produced a developmental order of acquisition of grammatical morphemes.

By transcribing a number of pre-schooler's spontaneous utterances and analyzing them according to Brown's model, we are able to estimate the child's stage development.

The child's first word is acquired some time around the age of twelve months and usually refers to his mother or father. The child eventually learns to use words to accomplish various functions, i.e., to identify, to question, etc.

The following table represents the various stages of morphological development of the pre-school child according to stage and age.

TABLE 2. Summary of
Brown's Stages of Morphological Development

STAGE	SPAN	M/MLU	APPROXIMATE AGE
I	1.5-2.0	1.75	15-30 months
II	2.0-2.5	2.25	28-36 months
III	2.5-3.0	2.75	36-42 months
IV	3.0-3.7	3.50	40-46 months
V	3.7-4.5	4.00	42-52+ months

Developmental Order of Acquisition of grammatical morphemes

Earliest

Present progressive (Running, Walking)
in, on
plural (s and z markers) — Stage II
past irregular (go, went, run, ran)
possessive (boy's coat, mommy's shoe)
uncontractible copula (He is sick) — Stage III

Developmental Order of Acquisition of grammatical morphemes (Con't)

articles (a, an, the)
past regular (jump, jumped, cry, cried)
third person regular (boys eat, boy eats) Stage IV
third person irregular (boys have, boy has, boy eats, boy eat)
uncontractible auxiliary (he is sleeping, he is running)
Latest
contractible copula (he's sick)
contractible auxiliary (he's sleeping, he's running) Stage V

"Stages" are determined by the child's MLU (mean length of utterance)

While the developmental order of acquisition is invariant, the age levels may vary considerably among children. Remeber, these age levels are ONLY APPROXIMATIONS!!!

Brown, Roger. First Language, The Early Stages, Harvard University Press. Cambridge, Mass. 1973.

The most reliable method of evaluating the child's morphological development is through the yse of a language sample. The child's spontaneous speech is recorded and analyzed according to morpheme count and/or mean length of utterance. At least 20 utterances are necessary for an evaluation. The following is an example of a language sample and the number of morphemes for each utterance.

AGE = 3 1/2 or 42 Months

1. A dog's gone	4	11. Is too!!	2
2. Boy run to house	4	12. Mommy got one	3
3. A orange	2	13. in here	2
4. Thems playes with me	6	14. He gone yesterday to see	5
5. two cookie for me	4	15. No	1
6. a big tiger ate him	5	16. Me and thems	4
7. go on	2	17. that mines	3
8. No	1	18. Here	1
9. I goes to zoo	4	19. Daddy goned	3
10. It her's	3	20. push it	2

1. The M/ML[illegible]s: 3.1
2. This child is in Stage IV

Total Morphemes 62

The Berry-Talbott Language Test (1969), Assessment of Children's Language Comprehension, Carrow Test For Auditory Comprehension of Language (1973) and Bangs Vocabulary Comprehension Scale (1976) can also be utilized to assess the area of morphological development.

SYNTACTICAL DEVELOPMENT

This aspect of language development relates to the word order and arrangement of words in a sentence.

A child learns the syntax of his language when he is able to join words into sentences and understands multiple-word sentences said by others. Some theorists believe that syntactic ability or syntax surpasses morphology in enabling children to be productive and creative in language use. Look closely at syntactic development gives us sharp insights into how children think and talk.

Children begin to acquire the syntax of their language at about 18 months of age and this extends throughout the elementary school years. Children learn the syntax of their language in stages.

Using Brown's developmental stages is a guide, the speech pathologist can elicit sentences from the pre-schooler which contain the syntactic structures which should be present in his language. For example: The boy is running. This represents syntactic construction which four and five year olds should have acquired. The child is told to repeat the sentence. The child will not be able to repeat the sentence accurately if he has not reached the appropriate developmental stage. He may respond with "Him run" or "running".

Some theorists believe that children acquire syntactic rules in six stages. In the first stage of development, the child utilizes the one word sentence which is the Holophrastic Stage. The child conveys meaning by not only the word he says, but also by his intonational patterns and gestures.

At about two years of age the child enters the Modification Stage. He forms kernal sentences by joining modifiers to core words such as: "big ball", "my milk?", "Daddy's car", "no bed!"

The third stage called the structure stage, which occurs about 2 1/2 ot 3 years has the child forming subject predicate constructs. "There is daddy." or "no dog bite?"

Operational changes are involved in stage four. The "operations" not to be confused with Brown's stages of morphological development involve word-order changes, tense changes and inversions, "Give me some piece of candy" or "Where Daddy did go?"

In stage five, the categorization stage, the child uses complete sentences. The stage 5 child is usually about five years of age and his speech closely resembles that of the adults in his environment. He utilizes nouns, pronouns, adverbs and adjectives. This categorization stage continues through the early elementary years.

When the child categorizes a noun as singular or plural, he must make the proper selection of a verb to use with the noun.

"The boy is sick."
"The boys are sick."

The complex structures are acquired by most children between five and ten years of age.

Carol Chomsky conducted research investigating the more complex English structures. She studied children 5 to 10 years of age and concluded that elementary school children are still acquiring the more complex structures of their language.

A good example of Chomsky's work was demonstrated when she employed three "ask" versus "tell" verbs to test children's understanding of the "ask" verb. "Tell" is acquired fairly early while "ask" causes some difficulty.

Chomsky cites the following three cases:

Case 1: Ask (tell) Bill what time it is?
Case 2: Ask (tell) Bill his (your) first name?
Case 3: Ask (tell) Bill what to feed the doll?

The following examples are from Chomsky's The Acquisition of Syntax in Children From 5 to 10, The M.I.T. Press, Cambridge, Massachusetts, 1969. At first, children confused the two verbs, interpreting both as "tell" verbs. Consider Eric (age six), who imposes a "tell" interpretation in all cases:

Tester: Ask Bill what time it is.
Eric: It's two o'clock.

Tester: Tell Bill your first name.
Eric: Eric.

Tester: Ask Bill his last name.
Eric: Smith.

Tester: OK, now, ask Bill what to feed the doll.
Eric: Feed him cake!

According to Chomsky, children acquire the "ask" verb in a stage by stage method. They first learn Case1, next Case 2, and finally Case 3. She found that even 10 year olds have difficulty with the "ask" verb.

The following tests are available for evaluatin the child's syntactical development:

Elicited Language Test (Carrow, 1975)
Northwestern Syntax Screening Test (Lee, 1969)
Menyuk Sentences (Menyuk, 1969)
Test for Auditory Comprehension of Language (Carrow, 1973)
Boehm Test of Basic Concepts (Boehm, 1969)
Vocabulary Comprehension Scale (Bangs, 1976)

SEMANTIC DEVELOPMENT

When we discuss the child's development of semantics in his language, we are concerned with meaning-- the relation of words and sentences to situations and ideas as opposed to syntax- the relation of words to each other in sentences.

The acquisition of semantics is a slow process. Results of recent studies tells us that words may not have meanings apart from the actual situation in which they are used until the child enters his 10th year. A five year old may define "to eat- Eat a hamburg, eat your cereal, etc." The child defines eating in terms of what he eats. A twelve year old would perhaps respond with: "To eat means to put something up to your mouth and chew and swallow it." Presently we look at the child's semantic development in conjunction with the other language areas.

According to Barbara Wood (1976) semantic development in children's language can be characterized by four stages, which parallel children's intellectual development.

During the first stage of development the child between one and two years communicates meaning in the holophrastic utterance (sentence like word).

The child from two to approximately 7 years communicates with words that relate to concrete actions and objects. Things, events and ideas are defined in terms of visible actions related to them. For example, a bird is "something that flies in the sky."

In the next stage of development words are defined in terms of the sentence contexts in which they are used by children.

If a boy talks about cats in terms of how, "they catch mice in the back yard", another might describe a cat as "something like a lion only smaller." The cat and lion share semantic features- they both belong to the "cat" family, have four legs, are fur covered, etc.,

When children reach twelve they may define cats as warm blooded animals that belong to the same family as lions and tigers. In this final stage, children associate several semantic properties in their meaning of "cat".

To understand how children acquire sentence meanings we must consider both the syntactic and semantic qualities. If the sentence is expressed in the passive voice, chances are the child will have greater difficulty understanding it.

After children understand this construction at about ten years of age, they are able to interpret all active and passive sentences.

The speech pathologist can evaluate a child's semantic development by administering various tests such as the Peabody Picture Vocabulary Test and the Test For Auditory Comprehension of Language and the Assessment of Children's language Comprehension.

The language sample is the most powerful diagnostic tool to use in assessing semantic skills.

It is the author's opinion that the use of a language sample is by far the most accurate assessment of the child's over all speech and language development.

Careful observation of the child interacting with his peers, his parents and other adults will also yield valuable information concerning the child's semantic development. The child's semantic development continues throughout his life time.

The Area of Communication Disorders at Central Michigan University is now in the process of screening Head-Start programs, Day Care Centers and nursery schools in a four county area. Our goal is to perfect an accurate, useful, comprehensive screening test. We know that early intervention is the answer for the speech and language impaired child. Our task is to utilize a tool to identify them in the screening process.

BIBLIOGRAPHY

Bangs, Tina. Vocabulary Comprehension Scale, Learning Concepts, 2501 N. Lamar Road, Texas 78705.

Berry, Mildred. Berry-Talbott Language Tests, Comprehension of Grammar, Rockford, Illinois, 1969.

Boehm, Ann. Boehm Test of Basic Concepts, Psychological Corporation, 304 East 45th Street, New York, N.Y. 10017.

Boxx, Julia. Acquisition of Language and the Use of the Language Sample as A Diagnostic Tool, Short Course, Michigan Speech and Hearing Association, Spring Convention, March, 1976.

Brown, Roger. First Language, The Early Stages, Harvard University Press, Cambridge, Mass. 1973.

Carrow, Elizabeth. Auditory Comprehension of Language, Learning Concepts, 2501 N. Lamar, Austin, Texas, 78704.

_____., Elicited Language Inventory, Learning Concepts, 2501 N. Lamar, Austin, Texas 78704, 1974.

Chomsky, Carol. The Acquisition of Syntax in Children from 5 to 10, The M.I.T. Press, Cambridge, Massachusetts, 1969.

Deese, James. Psycholinguistics, Boston: Allyn & Bacon, 1970.

Dunn, L.M. Peabody Picture Vocabulary Test, Circle Pines, Minn., American Guidance Service, 1959.

Foster, R., Giddan, J. and Stack, J. Assessment of Children's Language Comprehension, Consulting Psychologists Press, Inc., 577 College Ave., Palo Alto, Cal. 94306 (1972.

Goldman, Ronald., Fristoe Macalyne. Goldman-Fristoe Test of Articulation, American Guidance Service, Circle Pines, Minnesota 55014.

Lee, Laura. Northwestern Syntax Screening Test, Northwestern University, 1969.

Menyuk, Paula. The Development of Speech, New York: Bobbs-Merrill, 1972.

Menyuk, Paula. Sentences Children Use, M.I.T. Press, Cambridge, Mass. 1969.

McNeil, David. The Acquisition of Language: The Study of Developmental Psycholinguistics, New York: Harper and Row, 1970.

Pendergast, K., Dickey,T., Selmar, J., Soder, A. Photo-Articulation Test, Interstate Printers, Danville, Illinois 61832.

Slobin, David. The Acquisition of Language: The Study of Developmental Psycholinguistics, New York: Harper and Row, 1970.

Templin, Mildred, Darley, Frederic. The Templin-Darley Tests of Articulation, University of Iowa, Iowa City, 1969.

VanRiper, Charles, Erickson. Predictive Screening Test of Articulation, Western Michigan University, Kalamazoo, Michigan, 1968.

Wood, Barbara S. Children and Communication: Verbal & Non-Verbal Language Development, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1976.